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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,216	03/29/2004	Kangle Yang		3852

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KANGLE YANG
3#33 FANQING, XUANBAO 225432
TAIXING, JIANGSU,
CHINA

EXAMINER

SHUMATE, PAUL W

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3693

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/813,216	Applicant(s) YANG ET AL.	
	Examiner PAUL SHUMATE	Art Unit 3693	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 12 A3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>25 June 2004, 12 August 2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

1. This action is in reply to the application filed on 3/29/2004. Claims 1-40 are currently pending, have been examined, and stand rejected.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-40 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim set as a whole is replete with grammatical and/or structural problems. For example, the examiner has cited the following examples:

Claim 1 recites "the contracts in the auction pool." There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites "primarily according to a price aggressiveness," it is unclear if this new price aggressiveness is suppose to refer to the price aggressiveness of the orders as recited in disclosed in claim 2. There, there is insufficient antecedent basis for this limitation in the claim.

Claim 4, recite the limitation that the "priority factor includes a time chop." The art relevant definition for this terminology is not clear to the examiner. However, for the purpose of this examination, the examiner will interpret "priority factor includes a time chop" to be equivalent to using a "first come first serve" priority based on when orders are placed.

Claims 6, 10, 18, and 19 recite maximizing the aggregate number of zero fill orders after maximizing aggregate price aggressiveness. The examiner can not determine the utility, as claimed by the applicant in paragraphs 0060, that this limitation adds to the claims.

Claims 10 recites an immaterial claim limitation "optionally," as such claim language indicates that the recited steps are optional, in that they may or may not be performed. The Courts have held that actions which may or may not be performed are indefinite and do not distinguish the claim from the prior art. In re Collier, 158 USPQ 266 (CCPA 1968). Therefore, such a claim limitation is immaterial as it neither expands nor narrows the scope of the claim(s), and such claim language fails to particularly point out and distinctly claim the subject matter of the invention.

Claim 17 fails to further limit the claims. Claim 17 seems to repeat, word for word, the limitations of claim 12, from which it depends.

Examiner will examine the claims as they can best be interpreted in light of the specification, but to help further the prosecution of this application, the examiner requests that the applicant review all pending claims 1-40 and make corrections and clarifications where necessary.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim(s) 1-40 rejected under 35 U.S.C. 102(e) as being anticipated by Lange et al., U.S. Patent Application Publication No.: 2004/0111358.

Examiner's Note: The Examiner has cited particular columns and line numbers in the references as applied to the claims for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant, in preparing the responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

As per claim(s) 1-40, Lange teaches a method for settling an auction of contracts (see at least paragraph(s) 0035, 0038, 0043, 0084) which comprises:

- establishing a fill for orders in an auction pool without setting an auction settlement price (ASP) for the contracts in the auction pool; (see at least paragraph(s) 0033, 0073, 2545)
- based on the fill for the orders, setting the ASP for contracts in a qualified pool defined by the fill for the orders. (see at least paragraph(s) 0073, 0140, 0145, 2546-2547)
- establishing a fill for the orders in the auction pool primarily according to a price aggressiveness of the orders. (see at least paragraph(s) 0876, 1664, 2347, 2383) and secondarily according to a preselected priority factor other than price aggressiveness. (see at least paragraph(s) 0886) wherein the preselected priority factor includes a time chop. (see at least paragraph(s) 0886)
- maximizing an aggregate price aggressiveness subject to constraints defined in the orders. (see at least Figure 49 and paragraph(s) 0892, 0897, 0966, 1664, 1680)
- performing an LP optimization (see at least Figure 49 and paragraph(s) 0992, 2326, 2367) which maximizes an aggregate price aggressiveness subject to constraints defined in the orders. (see at least paragraph(s) 0992, 1680, 1681, 2326, 2367)
- performing a QP optimization (see at least paragraph(s) 0337, 0964, 0967)
- forming complete sets from the orders in the auction pool. (see at least paragraph(s) 0036, 0055, 1669) In Lange, the examiner interprets the fill for orders at the settling/equilibrium price to be a complete set because the total invested amount must equal the total amount paid out (less any transaction fees).
- adjusting fills determined by the complete sets according to constraints in the orders. (see at least Figure 66 paragraph(s) 2348, 2349)
- rounding non-integer fills to whole numbers, while maintaining the complete set criteria (see at least Figure 50 and paragraph(s) 1318, 1329, 2372)
- wherein the constraints in the orders comprise quantity limits (see at least paragraph(s) 0031, 0796 and Table 6.8.2)

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- performing an LP and/or QP optimization to determine a lower price bound and an upper price bound for contracts according to price constraints defined in the orders and further according to the fill for the orders; (see at least Figure 49 and paragraph(s) 2326, 2367, 2376, 0962, 0969, 0992)
 - limiting a risk due to deviation of the qualified pool from complete sets. (see at least paragraph(s) 0036, 0055, 1669)
 - expressing orders in the auction pool in terms of basic units (see at least the abstract and paragraph(s) 0003, 0006, 0007, 0139, 0145) wherein:
 - the step of establishing a fill for the orders in the auction pool comprises establishing the fill for the orders based on the expression of the orders in terms of basic units; (see at least paragraph(s) 0007, 2510, 2511, 2515)
 - the step of setting the ASP for contracts in a qualified pool comprises setting the ASP for contracts in a qualified pool based on the expression of the contracts in terms of basic units. (see at least Table(s) 3.1.1.1, 3.1.1.2 and paragraph(s) 2515)
 - wherein the basic units are mutually exclusive and collectively exhaustive. (see at least paragraph(s) 0006, 0292, 0820, 2510)
 - wherein all of the basic units have a same notional. (see at least paragraph(s) 2515)
 - minimizing a sum of variances (see at least paragraph(s) 1144, 1319, 1534, 1761)
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL SHUMATE whose telephone number is (571)270-1830. The examiner can normally be reached on M-F 8:30 AM - 6:00 PM, EST alt Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Kramer can be reached on 571-272-6783. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from

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either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Name: Paul W. Shumate
Title: Patent Examiner
Date: 3/31/08
Signature: /Paul Shumate/
Examiner, Art Unit 3693

/James A. Kramer/
Supervisory Patent Examiner, Art Unit 3693